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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Thomas Owens

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EXAMINER

MATTHEW, AARON D

ART UNIT

PAPER NUMBER

2114

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/022,574	OWENS, THOMAS	
	Examiner	Art Unit	
	Aaron D Matthew	2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9 and 11-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-9, 11-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 2 and 10 have been cancelled.
2. Claims 1, 3-9, and 11-21 have been examined.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 8 and 13-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitation "the signaling step" in line 1. There is insufficient antecedent basis for this limitation in the claim. Claim 1, as amended, lists two separate signaling steps, therefore, referring to "the signaling step" is indefinite. The examiner suggests changing the language of the claim to read, "wherein the signaling step the primary server address comprises...".

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Claim 13 recites the limitation "the monitor server address" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Claims 14-19 are rejected for the reasoning applied to claim 13, due to their dependence on claim 13.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-7, 9, 11 and 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coile et al, (US 6,108,300), and further in view of Pedersen, (US 5,862,348).

In the forthcoming explanations, it will be assumed that an ability to respond to packets sent to an address, as discussed in the context of network devices disclosed by Coile et al, inherently requires communication capability with a network. Said assumption is in accordance with the general knowledge expected of one of ordinary skill in the art at the time of applicant's invention.

Regarding claim 1, Coile et al. teaches a method for providing backup server support, (see Abstract), comprising:

- Operating a first server wherein the first server is capable of communication with a network, (col. 5, lines 55-61), and is associated with a primary server address, (note col. 5, lines 18-19);
- Maintaining a second server wherein the second server is capable of communication with the network, (col. 5, lines 61-65), configured in parallel with the first server, (note col. 6, lines 46-52), and is associated with a monitor server address, (col. 5, lines 32-34);
- Periodic messages sent between primary and secondary servers, (see col. 6, lines 14-22). According to the understanding of one of ordinary skill in the art, a message sent between two servers incorporates some form of signal, and therefore, Coile et al. teaches the following:
 - i. Signaling, using a first signal, the primary server address;
 - ii. Monitoring for a response to the first signal within a predetermined time period; and
 - iii. Repeating the signaling step and the monitoring step until a time period elapses, ("prescribed interval"), wherein the response is not received.

Moreover, the language in claim 16 of Coile et al, lines 3-5 discloses that the primary network device can become active if the primary network device is reset. Therefore,

Coile et al also teaches the step of booting the first server after a response is not received and the server has failed, (See also col. 9, lines 23-28).

Coile fails to teach the step of, in response to the booting of the first server, signaling, using a second signal, the monitor server address, and monitoring for a response to the second signal within a second time period.

Pedersen teaches a method for providing backup server support, comprising first and second servers, (see col. 4, lines 20-31), wherein, in response to the booting of the first, (i.e. master), server, (see col. 5, lines 13-19), the steps of signaling, using a second signal, the monitor server address, (see col. 5, lines 20-25; wherein those nodes receiving the election datagram communicate through monitor server addresses, see col. 3, lines 5-8), and monitoring for a response to the second signal within a second time period, (see col. 5, lines 31-48; note lines 42-45, which indicates a contingency for a case in which no response is received; if a system is capable of determining that no response is received, it is inherent that it will wait a certain time period to receive said response), are also disclosed.

Pedersen and Coile are analogous art because they are from the same field of endeavor, viz., backup network server devices.

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At the time of applicant's invention, one of ordinary skill in the art would have considered it obvious to combine the steps of signaling, using a second signal, the monitor server address and monitoring for a response to the second signal within a second time period, as taught in Pedersen, in response to the booting of the first server, taught in Coile.

One of ordinary skill in the art would have been motivated to combine the teachings because the method of Pedersen offers an advantage over Coile in providing a backup server in response to the failure of a primary server. Pedersen teaches an election mechanism that selects a most suitable server to replace a failed master server, based on selection criteria, (see col. 1, lines 64-67, and col. 4, lines 32-54; also note that Coile discloses an embodiment in which more than one backup is available for a server, see col. 13, lines 32-47). Pedersen suggests using criteria associated with an amount of load attached to a server, showing that performance in a network is improved through balancing of the work load among various servers, (see col. 1, lines 40-52). Therefore, the most under-utilized server will be the ideal candidate for replacing a failed master server, because it will have more resources available for performing the responsibilities of a master server. One of ordinary skill in the art would have been motivated to utilize the election mechanism of Pedersen, (comprising, in response to the booting of the first server, signaling using a second signal, the monitor server address, and monitoring for a response to the second signal within a second time period), to select a backup server from a group of

potential backup servers, in order to ensure that the most capable server is selected to replace the primary server, in Coile.

Regarding claims 13 and 20, the two servers operating in parallel, as disclosed by Coile et al, are inherently redundant. The backup server receives identical configuration data, must inherit all the functions of a failing primary server, and must perform identically in the event of said failure. Moreover, as they are both disclosed as computer network devices, the system functions described above and as applied to claim 1, inherently comprise a carrier containing computer program instructions thereon. Therefore, as explained above regarding claim 1, Coile et al teaches means for performing, and computer program instructions instructing a computer processor, (Fig. 9, element 914), to perform, the following steps:

- Signaling a primary server address;
- Monitoring for a response to the signal within a predetermined time period;
and
- Repeating the signaling step and the monitoring step until the response is not received within the predetermined time period, and thereafter performing a step of booting the first server,

As per claim 20, Coile et al teaches a first computing apparatus communicatively connected to a network, (col. 5, lines 55-61), and corresponding to a primary server address, (col. 5 lines 18-19), and a second computing apparatus in communication

with the network, (col. 5, lines 61-65), and configured in parallel with the first computing apparatus, (note col. 6, lines 46-52), and associated with a monitor server address, (col. 5, lines 32-34). A server, as disclosed by Coile et al and as understood by one of ordinary skill in the art, is inherently a computing apparatus.

Coile fails to teach, in response to the booting of the first server, signaling, using a second signal, the monitor server address, and monitoring for a response to the second signal within a second time period.

Pedersen teaches a system for providing backup server support, comprising first and second servers, (see col. 4, lines 20-31), wherein, in response to the booting of the first, (i.e. master), server, (see col. 5, lines 13-19), the steps of signaling, using a second signal, the monitor server address, (see col. 5, lines 20-25; wherein those nodes receiving the election datagram communicate through monitor server addresses, see col. 3, lines 5-8), and monitoring for a response to the second signal within a second time period, (see col. 5, lines 31-48; note lines 42-45, which indicates a contingency for a case in which no response is received; if a system is capable of determining that no response is received, it is inherent that it will wait a certain time period to receive said response), are also disclosed.

At the time of applicant's invention, one of ordinary skill in the art would have considered it obvious to combine the steps of signaling, using a second signal, the

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monitor server address and monitoring for a response to the second signal within a second time period, as taught in Pedersen, in response to the booting of the first server, taught in Coile.

One of ordinary skill in the art would have been motivated to combine the teachings because the system of Pedersen offers an advantage over Coile in providing a backup server in response to the failure of a primary server. Pedersen teaches an election mechanism that selects a most suitable server to replace a failed master server, based on selection criteria, (see col. 1, lines 64-67, and col. 4, lines 32-54; also note that Coile discloses an embodiment in which more than one backup is available for a server, see col. 13, lines 32-47). Pedersen suggests using criteria associated with an amount of load attached to a server, showing that performance in a network is improved through balancing of the work load among various servers, (see col. 1, lines 40-52). Therefore, the most under-utilized server will be the ideal candidate for replacing a failed master server, because it will have more resources available for performing the responsibilities of a master server. One of ordinary skill in the art would have been motivated to utilize the election mechanism of Pedersen, (comprising, in response to the booting of the first server, signaling using a second signal, the monitor server address, and monitoring for a response to the second signal within a second time period), to select a backup server from a group of potential backup servers, in order to ensure that the most capable server is selected to replace the primary server, in Coile.

Regarding claim 14, two servers are disclosed, that can operate as either a primary or a backup, (col. 5, lines 25-32). Coile et al, also, in reference to Fig. 9, elements 916 and 922, discloses that, in the preferred embodiment, each network device includes its own local memory. Therefore, Coile et al teaches a first and a second server including a first server memory and a second server memory respectively. As Coile et al teaches a means for copying data from the first server memory to the second server memory, (col. 6, lines 46-54), that is coincident with the process of periodically signaling the two servers, it is inherent in the design that data is copied from the first server memory to the second server memory after the signaling step is repeated a predetermined number of times.

Regarding claims 3, 5 and 15, see Coile, col. 4, lines 15-16, wherein the second server is operated as the first, in providing server services to the network, when the first has failed.

Regarding claim 4, see Coile, col. 5, lines 20-25, wherein the operating step comprises providing server services to the network.

As per claims 6 and 16, as it is disclosed in Coile, col. 4, lines 5-16, the second server is maintained in a backup mode so that the second server can be associated

with the primary server address, (col. 4, lines 11-13), when the response is not received within the predetermined time period.

Regarding claims 7 and 17, the primary server address is an Internet protocol address in the embodiment disclosed in Coile, col. 4, lines 15-16.

Regarding claims 9 and 18, Fig. 5 of Coile discloses a process flow diagram illustrating that a response to the first signal in the time period is indicative of operation of the first server as the primary server, and an absence of the response to the first signal in the time period is indicative of primary server malfunction or inactivity.

Regarding claim 11, if a response to the second signal, (confirmation message from the primary server), is received within the given time period, the second server is operated as normal, (i.e. as a monitor or backup server), and continues to check the primary server for failure. Figure 5 of Coile shows a process flow diagram that illustrates the process by which a primary or backup network device is either failed, or allowed to proceed in its current operation.

Regarding claim 19, two servers are disclosed, that can operate as either a primary or a backup, (col. 5, lines 25-32). Coile et al, therefore, in reference to Fig. 9, elements 916 and 922, discloses a first and a second server including a first server

memory and a second server memory respectively. Both servers are inherently considered computing apparatuses that are communicatively connected to a network, (see col.5 lines 55-65), the first and second server corresponding to a primary server address; (col. 5, lines 18-19), and secondary server address, (col. 5, lines 32-34), respectively.

Regarding claim 21, please see the arguments presented in reference to the method of claim 1, and note also that Coile et al teaches that said method wherein the first server includes a first server memory and the second server includes a second server memory, and further comprising an additional step of, after the signaling step is repeated a predetermined number of times, copying data from the first server memory to the second server memory. Please note that Coile et al, in reference to Fig. 9, elements 916 and 922, discloses that, in the preferred embodiment, each network device includes its own local memory. Therefore, Coile et al teaches a first and a second server including a first server memory and a second server memory respectively. As Coile et al teaches a means for copying data from the first server memory to the second server memory, (col. 6, lines 46-54), that is coincident with the process of periodically signaling the two servers, it is inherent in the design that data is copied from the first server memory to the second server memory after the signaling step is repeated a predetermined number of times.

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Coile fails to teach, in response to the booting of the first server, signaling, using a second signal, the monitor server address, and monitoring for a response to the second signal within a second time period.

Pedersen teaches a system for providing backup server support, comprising first and second servers, (see col. 4, lines 20-31), wherein, in response to the booting of the first, (i.e. master), server, (see col. 5, lines 13-19), the steps of signaling, using a second signal, the monitor server address, (see col. 5, lines 20-25; wherein those nodes receiving the election datagram communicate through monitor server addresses, see col. 3, lines 5-8), and monitoring for a response to the second signal within a second time period, (see col. 5, lines 31-48; note lines 42-45, which indicates a contingency for a case in which no response is received; if a system is capable of determining that no response is received, it is inherent that it will wait a certain time period to receive said response), are also disclosed.

At the time of applicant's invention, one of ordinary skill in the art would have considered it obvious to combine the steps of signaling, using a second signal, the monitor server address and monitoring for a response to the second signal within a second time period, as taught in Pedersen, in response to the booting of the first server, taught in Coile.

One of ordinary skill in the art would have been motivated to combine the teachings because the system of Pedersen offers an advantage over Coile in providing a backup server in response to the failure of a primary server. Pedersen teaches an election mechanism that selects a most suitable server to replace a failed master server, based on selection criteria, (see col. 1, lines 64-67, and col. 4, lines 32-54; also note that Coile discloses an embodiment in which more than one backup is available for a server, see col. 13, lines 32-47). Pedersen suggests using criteria associated with an amount of load attached to a server, showing that performance in a network is improved through balancing of the work load among various servers, (see col. 1, lines 40-52). Therefore, the most under-utilized server will be the ideal candidate for replacing a failed master server, because it will have more resources available for performing the responsibilities of a master server. One of ordinary skill in the art would have been motivated to utilize the election mechanism of Pedersen, (comprising, in response to the booting of the first server, signaling using a second signal, the monitor server address, and monitoring for a response to the second signal within a second time period), to select a backup server from a group of potential backup servers, in order to ensure that the most capable server is selected to replace the primary server, in Coile.

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5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coile et al, in view of Pedersen, as applied to claim 1 above, and further in view of Midgeley et al (U.S. 5,592,611).

Coile, in view of Pedersen, discloses a ping test, (see Coile, col. 11, lines 11-17), consisting of sending out a broadcast ping request.

Coile, in view of Pedersen, fails to disclose a step of pinging the primary server address.

Midgeley et al teaches a server periodically broadcasting a "Service Advertising Protocol" (SAP) packet in response to a ping broadcast by a client, (col. 8, lines 6-12).

Midgeley et al, Coile et al and Pedersen are considered analogous art as they teach a multiple server environment in which at least one server is used to replace another should the latter fail.

The preferred embodiment of applicant's invention, as disclosed in the language of claim 8, comprises the use of a ping protocol for determining the operational status of a primary server. Midgeley et al teaches the use of the ping protocol by a client in an attempt to receive an SAP packet from a server, and establish a connection.

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The use of a ping protocol is well known in the art, and has been defined in The American Heritage College Dictionary as a means for a computer to determine whether another computer is reachable. It would have been clearly recognized by one of ordinary skill in the art that a computer that is not reachable may very well have experienced some failure. Therefore, one of ordinary skill in the art at the time of applicant's invention would have found it obvious, and would have been properly motivated, to use the ping protocol as a means of determining whether a primary server has failed.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coile et al, in view of Pedersen, as applied to claim 1 above, and further in view of Li et al (U.S. 5,473,599).

As best understood by the examiner, the preferred embodiment of applicant's invention teaches that a server attempting to operate as a monitor server, (see Fig. 2), will attempt to operate as primary server, (see Fig. 1), when discovering that another server is already operating as monitor server at the monitor server address. The examiner will assume that the phrase, "the second server is thereafter operated as a primary server," on lines 2-3 of claim 12, is referring to the aforementioned process as diagramed in Figures 1 and 2, and as detailed in the disclosure on pages 11-12. Therefore, a lack of response to the second signal within the second time

period is equivalent to the second server discovering another server operating at the monitor server address.

Coile, in view of Pedersen, teaches a system in which a primary network device will not take over for a standby device if the primary network device discovers that the standby device is already active, (col. 11, lines 49-54).

Coile, in view of Pedersen, fails to teach a system in which a backup device is operated as a primary device in the event that it discovers another device already operating as a backup device.

Li et al discloses a system of routers comprising an active router and a standby router, as well as a group of inactive routers that can be used to replace either an active or standby router, (see Abstract). In col. 10, lines 14-31, a process is disclosed in which a new router does not receive a response to a signal sent to the current standby router, (col. 10, lines 18-19), discovers another inactive router of higher priority, (col. 10, lines 24-27), and is thereafter available to take the place of a primary server, (col. 2, lines 44-46). It is also disclosed that, should the new router discover another router acting as standby router, the new router would also thereafter be available to take the place of a primary server, (see col. 2, lines 44-46). This offers the advantage of having more than one router always available to fill a deficiency in either the primary or standby roles.

Coile, Pedersen, and Li et al are considered analogous art because they disclose systems in which a primary network device is backed up by a standby network device. Moreover, these systems both involve automatic signaling between the primary and standby devices to determine when a device requires replacement, and to facilitate automatic replacement.

One of ordinary skill in the art at the time of applicant's invention would have clearly understood the advantages of allowing all network devices in a system to quickly fill a deficiency in either the primary or standby roles as disclosed in Coile, in view of Pedersen, and Li et al. It would have been obvious to one of ordinary skill in the art that, a server that was previously available to fill in as a primary or secondary server, when attempting to serve as standby server and discovering that that role is already filled, should again be made available to fill in, as needed, in either a primary or secondary role. Though Coile, in view of Pedersen, does not explicitly teach the step in which a server discovers the standby role is filled, and thereafter attempts to perform the role of the primary, Coile, in view of Pedersen, does teach a system in which any server is able to identify another as being active and will attempt to provide backup services if another backup server is not present, (see Fig. 7). One of ordinary skill in the art at the time of applicant's invention would have been properly motivated to include the step of a server attempting to fill a primary role when

discovering the standby is filled in order to increase the responsiveness of the system to a deficiency in either the standby or primary roles.

Response to Arguments

1. Applicant's arguments, see pages 8-10, filed 08/26/2004 have been fully considered but they are not persuasive.

On page 8, under section **CLAIM REJECTIONS – 35 U.S.C 102**, with respect to claims 1, 13, 20 and 21, the applicant argues, “that Coile, et al does not teach, inter alia, a method, [or system], for providing backup server support comprising ‘in response to the booting of the first server: signaling, using a second signal, the monitor server address; and monitoring for a response to the second signal within a second time period’ in combination with the additionally claimed features as recited in claim 1 and 21, [13 and 20].” The examiner agrees with the applicant that Coile et al does not teach the mentioned limitation.

However, Pedersen teaches a method for providing backup server support, comprising first and second servers, (see col. 4, lines 20-31), wherein, in response to the booting of the first, (i.e. master), server, (see col. 5, lines 13-19), the steps of signaling, using a second signal, the monitor server address, (see col. 5, lines 20-25; wherein those nodes receiving the election datagram communicate through monitor

server addresses, see col. 3, lines 5-8), and monitoring for a response to the second signal within a second time period, (see col. 5, lines 31-48; note lines 42-45, which indicates a contingency for a case in which no response is received; if a system is capable of determining that no response is received, it is inherent that it will wait a certain time period to receive said response), are also disclosed.

Pedersen and Coile are analogous art because they are from the same field of endeavor, viz., backup network server devices.

At the time of applicant's invention, one of ordinary skill in the art would have considered it obvious to combine the steps of signaling, using a second signal, the monitor server address and monitoring for a response to the second signal within a second time period, as taught in Pedersen, in response to the booting of the first server, taught in Coile.

One of ordinary skill in the art would have been motivated to combine the teachings because the method of Pedersen offers an advantage over Coile in providing a backup server in response to the failure of a primary server. Pedersen teaches an election mechanism that selects a most suitable server to replace a failed master server, based on selection criteria, (see col. 1, lines 64-67, and col. 4, lines 32-54; also note that Coile discloses an embodiment in which more than one backup is available for a server, see col. 13, lines 32-47). Pedersen suggests using criteria

associated with an amount of load attached to a server, showing that performance in a network is improved through balancing of the work load among various servers, (see col. 1, lines 40-52). Therefore, the most under-utilized server will be the ideal candidate for replacing a failed master server, because it will have more resources available for performing the responsibilities of a master server. One of ordinary skill in the art would have been motivated to utilize the election mechanism of Pedersen, (comprising, in response to the booting of the first server, signaling using a second signal, the monitor server address, and monitoring for a response to the second signal within a second time period), to select a backup server from a group of potential backup servers, in order to ensure that the most capable server is selected to replace the primary server, in Coile.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron D Matthew whose telephone number is (571) 272-3662. The examiner can normally be reached on Mon-Fri, from 8:00 am - 5:30 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aaron D Matthew
Examiner
Art Unit 2114

ADM


ROBERT BEAUSOLIEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100